

METHOD FOR HYBRID PROCESSING OF SOFTWARE INSTRUCTIONS OF AN  
EMULATED COMPUTER SYSTEM

ABSTRACT OF THE DISCLOSURE

A method for processing software instructions in an emulated computing environment is provided in which instruction blocks from the application programs of a guest computer system are parsed to determine whether the instruction blocks include instructions executable at user level or supervisor level. Those instruction blocks that are executable at user level are passed directly to the processor of the host computer system, and those instruction blocks that are executable at supervisor level, are translated before being passed to the processor for execution. In the case of instruction blocks that include instruction blocks executable at supervisor level, prior to translation, a cache is queried to determine whether a translation for the instruction block is in the cache. If a translation is in the cache, the translated version in the cache is provided to the processor for execution. If a translation is not in the cache, translation occurs, and the translated instruction block is saved to the cache.